CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 95-130

UPDATED WASTE DISCHARGE REQUIREMENT FOR:

CITY OF BURLINGAME
SANITARY SOLID WASTE DISPOSAL SITE
BURLINGAME, SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. The City of Burlingame (referred to herein as the discharger) owns the inactive Burlingame Sanitary Solid Waste Disposal Site. The site is located in the City of Burlingame, surrounded by Airport Boulevard separating it from San Francisco Bay on the north, Doubletree Hotel on the east side, and a marsh and the Burlingame Lagoon, a tributary to San Francisco Bay on the south. A waste water treatment plant and city park is located to the west of the site as shown on the attached maps which are incorporated herein and made part of this order. The site is maintained as undeveloped open space.

PURPOSE OF UPDATING ORDER:

2. The primary purpose of this order is to update the site's groundwater monitoring program, and assure proper closure of the site. The landfill has been operating under Waste Discharge Requirements Order No. 82-55.

SITE DESCRIPTION:

3. The site is located on former tidal flats along the western margin of San Francisco Bay. The address of this site is 1001 Airport Boulevard, Burlingame. The site had been operated for the City by the San Mateo Disposal Company/ Browning Ferris Industries (BFI) shortly after landfilling operations began in 1957. The site accepted only inorganic construction debris, concrete rubble, wood, plastic, garden refuse, metal and clean soil. No household garbage or hazardous waste have been accepted. The landfill was closed in 1987.

4. In 1987, a seepage barrier, leachate drain and methane gas collection system were constructed along the east side of the landfill in conjunction with the construction of a nearby hotel and the extension of Anza Boulevard. During the Airport Boulevard renovation in 1989 and 1990 a vertical clay containment

barrier and a leachate drain immediately north of the landfill also were constructed. The west end of the containment barrier was keyed into clean fill which had been placed there during construction of the existing waste water treatment plant to the west of the landfill. The east end was tied into the seepage barrier along the eastern perimeter. The barrier was tied at least 2 feet into bay mud.

5. The site has as much as 30 feet of soil and refuse fill. The terrain of the surrounding area is mostly flat with elevations ranging from 5 to 25 feet MSL. Placement of fill and refuse at the site has created low, broad hills with a maximum elevation of 40 feet.

GEOLOGIC SETTING OF THE SITE:

6. The Burlingame landfill is located on the western side of San Francisco Bay. The bay occupies a major structural depression between the Coast Ranges and the Berkeley Hills. Subsurface geology is characterized by a series of continental and marine sediments overlying bedrock. Bedrock is exposed in the surrounding highlands. Most of the bedrock consists of Jurassic to Pliocene marine sediments with rocks of the Franciscan Complex predominating.

7. Quaternary alluvium consisting of unconsolidated sand, silt and clay overlies the bedrock. These sediments are alluvial fan, stream and outwash plain deposits that occur as interfingering layers. A gray/green clay deposited during marine interglacial periods is referred to as " Bay Mud" and underlies the waste and fill materials. The Bay Mud was originally continuous across the site; however, reworking in the southeastern are may have resulted in discontinuities. The stratigraphic sequence below the bay mud consists of an upper clay, upper sand, lower clay and lower sand unit. The refuse and fill and the upper and lower sand are water bearing units. The upper clay acts as an aquitard between the bay mud and the upper sand.

8. The upper sand unit is comprised of sandy gravel and gravelly sand, ranging in thickness from 3 to 28 feet. This unit is discontinuous across the site and was removed along the southern part of the site as was the upper clay. Beneath the upper sand unit is the lower clay, an aquitard 12 to 32 feet in thickness and continuous across the site. Where the upper sand is absent the upper and lower clays merge into one unit. The lower sand is composed of sandy gravel and clayey sand which varies in thickness from 12 to 21 feet. It appears to be continuous across the site.

LEACHATE AND GROUNDWATER LEVELS

9. The very irregular distribution of several lithologic formations which are not continuous under the entire landfill coupled with excavations at several locations within the landfill which has resulted in irregularities within the piezometric surfaces makes interpretation of water levels difficult. The refuse was discontinuously distributed across the site and may not be hydraulically connected. Perched water levels also appear to be present within the refuse.

10. The upper sand wells are under tidal influence either due to incursion of bay waters or due to tidal pressure effects. The upper sand wells have flow directions into Burlingame Lagoon (south) and into San Francisco Bay (north) during low tides and towards the center of the site during high tide. There is a downward gradient between waste and upper sand. The lower sand displays an upward gradient where the interlayered aquiclude is present. There does not appear to be a connection between the upper and lower sand wells as the latter has much reduced contaminant levels or they are absent, when compared to the upper sand wells.

11. Leachate levels in the waste and fill were estimated in one well to be as high as 8' MSL adjacent to Burlingame Lagoon. This high elevation of leachate is thought to be the result of a perched leachate level, in part the result of discontinuous refuse and fill. Historical construction activities have reworked or removed portions of the bay mud, upper clay and upper sand which may have created connections between waste and upper sand. The excavated areas were backfilled with refuse and fill.

ANALYTIC RESULTS

12. The leachate has high concentrations of Total Kjeldahl Nitrogen (TKN) and Volatile Organic Compounds (VOCs) historically below MCLs. Sodium and Chloride concentrations are high depending on the amount of bay water and/or pore water mixing.

13. Several of the wells in the waste show an impact from leachate as evidenced by the presence of VOCs and high concentrations of TKN. Vertical flow generally is downwards from the refuse and fill into the upper sand. Groundwater in the upper sand is characterized by moderate to high concentrations of TDS, low to moderate concentrations of TKN and TOC and the absence of VOCs. Groundwater in the lower sand is characterized by very low concentrations of TKN, TOC's, TDS, and chloride concentrations and absence of VOCs.

compliance as provided in Section 2550.5. The discharger shall monitor for the parameters listed in Attachment B in conformity with the requirements of this Order and Article 5 of Chapter 15. Within 15 months following the adoption of this Order, the discharger shall submit a monitoring program to include a statistical analysis method to the Board for approval by the Executive Officer. A non-statistical method (e.g., concentration trend analysis and comparison to practical quantitation limits) will be utilized to evaluate the significance of groundwater data until the proposed statistical methods are approved by the Board.

C. PROVISIONS

1. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order, immediately upon adoption of this Order or as provided below.

2. Federal Regulations [40 Code of Federal Regulations (CFR) Parts 122, 123 and 124] require specific categories of industrial activities, including landfills, to obtain an NPDES permit for storm water discharges. The State Water Resources Control Board has issued a General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES Permit No. CAS000001). This Facility is subject to these water discharges from two storm water events during each wet season which produces significant storm water discharges as defined in State Water Resources Control Board Order No. 92-12 DWQ (General Permit for Storm Water Discharges). As specified in the attached monitoring program, the samples must be analyzed for:

   a. pH, Total Suspended Solids (TSS), Specific Conductance, and Total Organic Carbon (TOC).

   b. Toxic chemicals and other pollutants that are likely to be present in storm water in significant amounts.

3. The discharger shall submit a detailed **Post Earthquake Inspection and Corrective Action Plan** acceptable to the Executive Officer to be implemented in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 30 miles of the landfill. The report shall describe the containment features, and ground water monitoring and leachate control facilities potentially impacted by the static and seismic deformations of the landfill. The plan shall provide for

reporting results of the post earthquake inspection to the Board within 72 hours of the occurrence of the earthquake. Immediately after an earthquake event causing damage to the landfill structures, the corrective action plan shall be implemented and this Board shall be notified of any damage.

REPORT DUE DATE: WITHIN THREE MONTHS OF ADOPTION OF THIS ORDER

4. The discharger shall submit a **Contingency Plan** to be instituted in the event of a leak or spill from the leachate facilities. The discharger shall give immediate notification to the San Francisco Bay Regional Water Quality Control Board, the Local Enforcement Agency (LEA), and the California Department of Toxic Substance Control. The discharger shall initiate its corrective action plan to stop and contain the migration of pollutants from the site.

REPORT DUE DATE: WITHIN THREE MONTHS OF ADOPTION OF THIS ORDER

5. The discharger shall file with the Regional Board Discharge Monitoring Reports (Detection Monitoring Program) prepared under the supervision of a registered civil engineer or registered geologist performed according to any **Discharge Monitoring Program** issued by the Executive Officer.

REPORT DUE DATE: QUARTERLY

6. The discharger submitted a rough grading plan in June 1994, which was approved by the Board. This work is to be completed no later than September 30, 1995.

REPORT DUE DATE: NOVEMBER 30, 1995

7. The discharger must submit a final landfill cover design to complete closure and comply with the Specifications of Chapter 15. The plan must include a construction and work completion time schedule acceptable to the Executive Officer.

REPORT DUE DATE: MARCH 31, 1996

8. The following shall be included in the closure and post-closure maintenance plan:

a. A description and quantification of water entering, leaving, and remaining on-site from all sources to determine potential adverse impacts due to proposed use, and corresponding mitigative design features which will ensure the physical and hydraulic integrity of the final cover, (Article 8, Section 2597 (11) (b) (1).

b. The discharger shall install and maintain necessary structures to control surface erosion of the cap and slopes of the landfill in accordance with the requirements of the Clean Water Act, including the National Pollutants Discharge Elimination System. The discharger shall maintain good surface drainage, resisting soil erosion and minimize long term maintenance of the final cover systems. The site must be periodically inspected for cracks and erosion of the cover which must be repaired and reseeded when necessary. Observations of erosion and necessary maintenance must be reported to the regional Board within 30 days of such event.

c. The discharger shall make quarterly visual inspections of the cap and report any failure or cracking, or failure of installed devices or ponding of surface water to the board within 15 days of noting such failure or ponding.

9. The discharger has established an irrevocable closure fund to ensure closure and post closure maintenance pursuant to Section 2580 (f) of Chapter 15 that will assure proper closure and postclosure monitoring and maintenance of the site . For purposes of planning the discharger shall assume a post closure period of at least 30 years. The discharger shall provide an evaluation of closure and postclosure monitoring and maintenance costs.

REPORT DUE: SEPTEMBER 30, 1995

10. The discharger must comply with all applicable items of the attached Detection Monitoring Program, or any amendments following thereafter .

11. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation of this Order, the

succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. (Refer to Standard Provisions referenced above). The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contact with the Board and a statement. The statement shall comply with the signatory paragraph described in Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

12. The discharger has monitored the site quarterly since 1988 and has not detected leakage from the landfill. This Order requires the discharger to initiate a quarterly self monitoring program to be performed including the months of February or March of each year, as detailed in attached Parts A & B.

13. The discharger shall analyze groundwater and surface water samples for the parameters as presented in the attached part B of the discharge monitoring program.

14. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which may arise in the future as result of this waste discharge or related operations.

15. The discharger shall permit the Board or its authorized representative, upon presentation of credentials:

    a. Immediate entry upon the premises on which wastes are located or in which any required records are kept.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order or by any other California State Agency.

    d. Sampling of any discharge or ground water governed by this Order.

16. These requirements do not authorize commission of any act causing

injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

17. This Order is subject to Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan or changes in the discharge characteristics.

18. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications and Provisions of this Order, shall also be provided to the Environmental Health Services Division of San Mateo County.

I Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of a Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 21, 1995.

Steven R. Ritchie
Executive Officer

Attachments:

Site Location Map
Site Map and Well Locations
Self Monitoring Plan

BENEFICIAL USES OF SAN FRANCISCO BAY AND BURLINGAME LAGOON

14. The beneficial uses of shallow groundwater and the beneficial uses of San Francisco Bay and Burlingame Lagoon are:

    a. Wildlife habitat
    b. Brackish and saltwater marshes
    c. Water contact recreation
    d. Non-water contact recreation
    e. Commercial and sport fishing
    f. Preservations of rare and endangered species
    g. Estuarine habitat
    h. Fish migration and spawning

15. The existing and potential uses of groundwater in the lower sand is limited due to the brackish and saline waters under the Burlingame landfill

CALIFORNIA ENVIRONMENTAL QUALITY ACT

16. This action is exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15308, Title 14 of the California Code of Regulation.

17. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge, and has provided them with an opportunity to submit their written views and recommendations.

18. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED pursuant to authority detailed in Title 23, Chapter 15, Section 2581 and the California Water Code Division 7, that the discharger, their agents, successors and assignees complete closure activities (modification of the clay cap), conduct postclosure maintenance and groundwater monitoring.

A. PROHIBITIONS

1. Wastes shall not be in contact with ponded water.

2. Wastes of any origin and type shall not be deposited or stored at this site.

3. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or of the United States.

4. The discharger, or any future owner or operator of this site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:

   a. Surface Waters

      1. Floating, suspended, or deposited macroscopic particulate matter or foam.

      2. Bottom deposits or aquatic growth.

      3. Adversely altered temperature, turbidity, or apparent color beyond natural background levels.

      4. Visible, floating, suspended or deposited oil or other products of petroleum origin.

      5. Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations. (Note: the surface waters and shallow groundwater on and in the vicinity of the site are not used for human consumption since they are brackish and/or saline).

   b. The groundwater shall not be degraded as a result of the waste maintained at the facility.

B. SPECIFICATIONS

1. All reports pursuant to this Order shall be prepared under the supervision of a registered civil engineer, California registered geologist or certified engineering geologist.

2. The site shall be protected from any washout or erosion of wastes from inundation which could occur as a result of a 100-year 24-hour

precipitation event, or as a result of flooding with return frequency of 100 years.

3. The discharger installed a leachate collecting system along the bay front and the east side of the site. The system is presently not operational as it is not connected to any pumping facility. Leachate levels within the leachate collection system are monitored in one manhole along the course of the leachate collection system to determine leachate elevations, which can be controlled by pumping of the leachate collection system.

4. The existing leachate control facility shall be maintained and remain operational during the post closure maintenance period and shall be made operational in the event leachate poses a threat to water quality.

5. The discharger shall assure that the refuse fill and the structures which are capable of controlling leachate, surface drainage, erosion and gas for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.

6. The exterior surfaces (cap) shall be graded to promote lateral runoff of precipitation and ensure that ponding does not occur.

7. A detailed survey of the landfill's cap must be made, to assure that construction is in compliance with the requirements of Article 8 of Chapter 15.

8. The discharger shall maintain and monitor the waste unit to prevent a statistically significant increase to exist between water quality at the point of compliance as provided in Section 2550.5, Article 5 of Chapter 15.

9. In the event of a release of a constituent of concern beyond the Point of Compliance. The site does not have an upgradient or downgradient location as it is located between two tidal water bodies which influence water levels on the site. However, the site will begin an Evaluation Monitoring Program in the event that a release is confirmed during the Detection Monitoring Program pursuant to Section 2550.9, whenever there is a statistically significant evidence of a release. During the Compliance Period, the discharger shall perform an Evaluation Monitoring Program and a Corrective Action Program.

10. The discharger shall install any additional groundwater and leachate

monitoring devices required to fulfill the terms of any Discharge Monitoring Program issued by the Executive Officer.

11. Methane and other landfill gases shall be adequately vented, removed from the landfill units, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration through the vadose (unsaturated) zone in accordance with applicable regulatory requirements.

12. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations during the active life and post-closure maintenance period.

13. The discharger shall maintain all devices or designed features, installed in accordance with this Order such that they continue to operate as intended without interruption as provided for by the performance standards adopted by the California Integrated Waste Management Board.

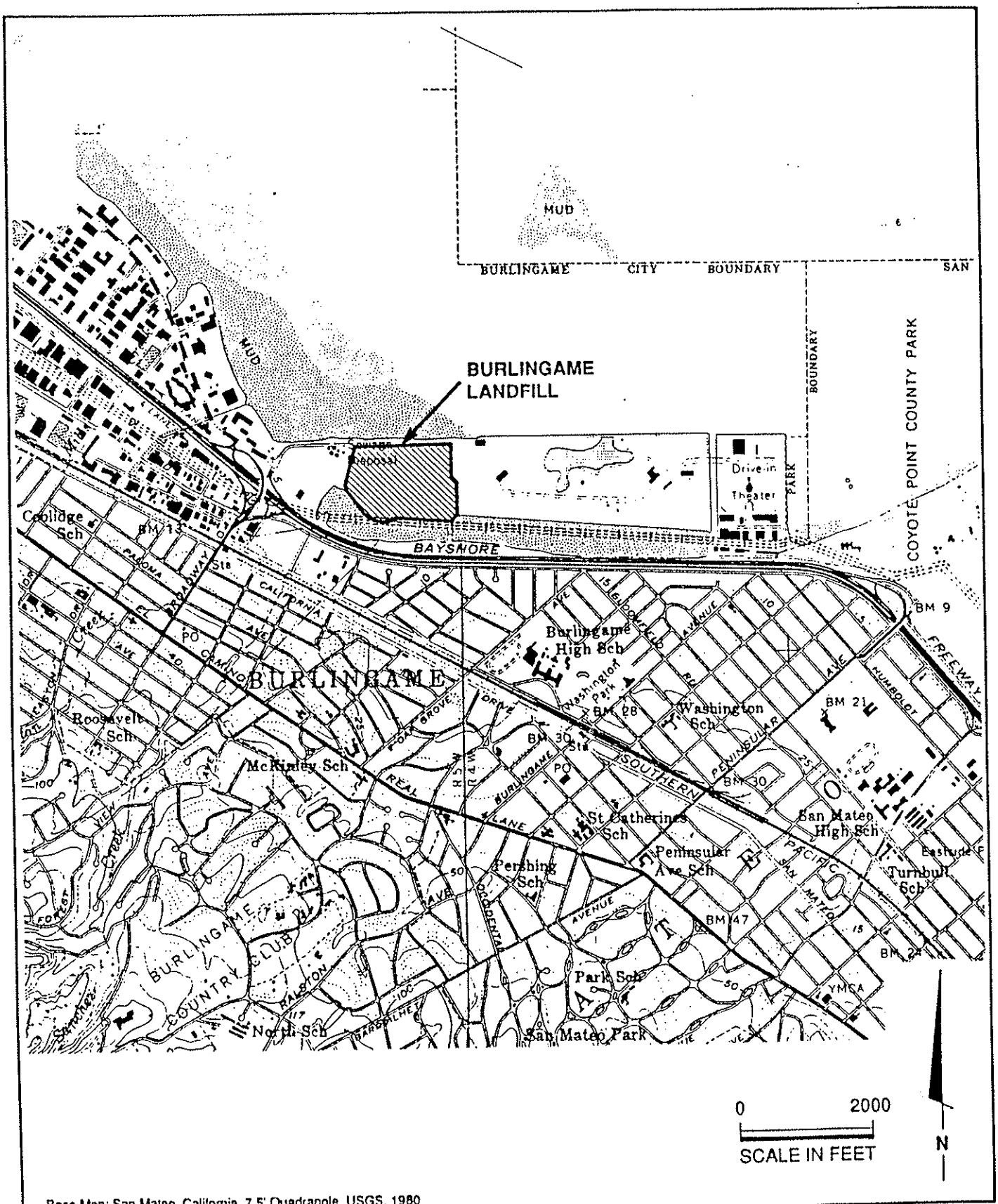
14. The discharger shall provide and maintain a minimum of two permanent survey monuments near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the post-closure and maintenance periods. These monuments shall be installed by a licensed land surveyor or registered civil engineer.

15. The Regional Board shall be notified immediately of any failure occurring in the waste management unit. Any failure which threatens the integrity of containment features on the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer

16. The discharger must reconstruct the final cover to meet the requirements of Chapter 15.

17. The discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order.

18. The discharger shall maintain the facility so as to prevent a statistically significant increase in water quality parameters at the point of



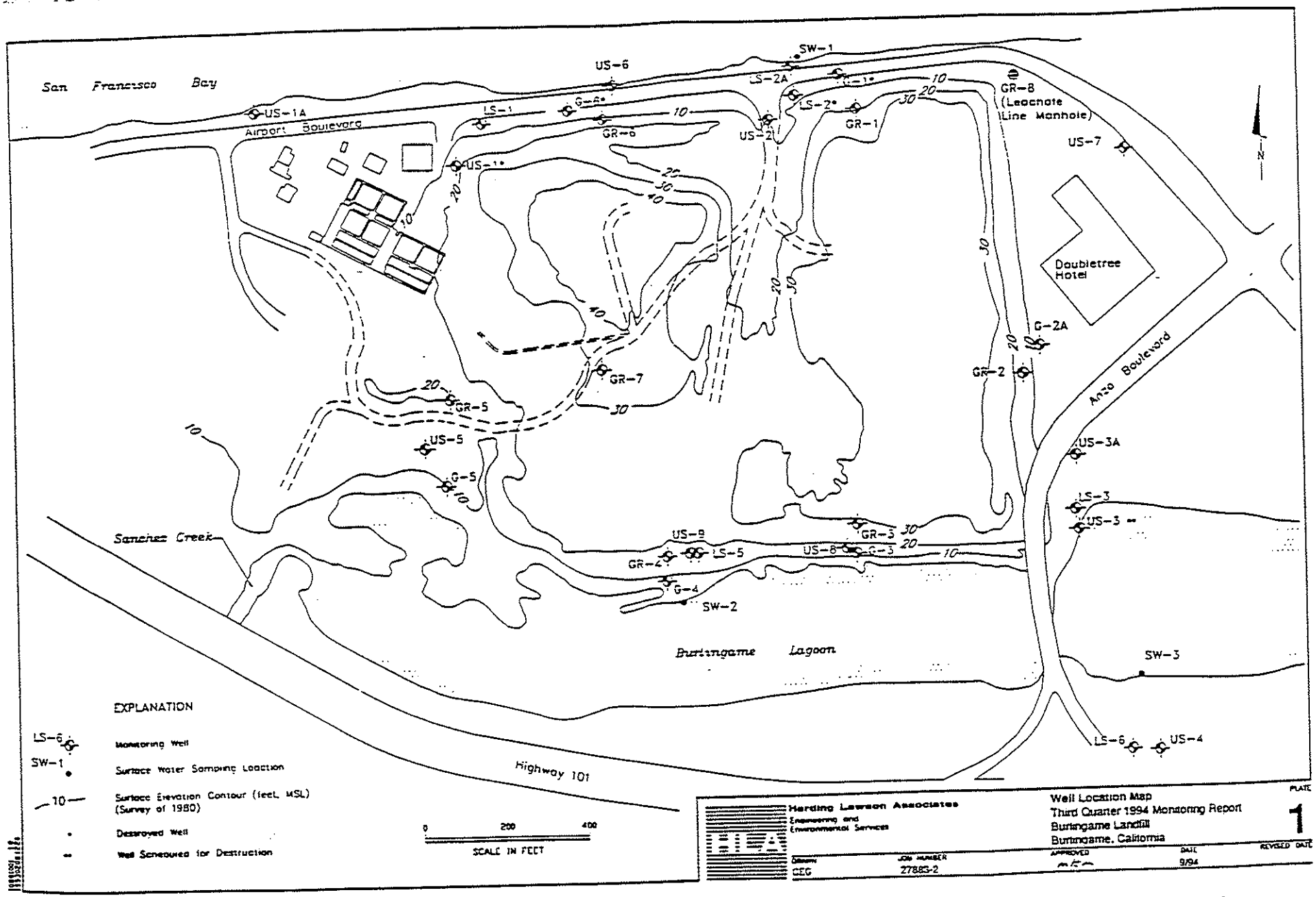
Base Map: San Mateo, California, 7.5' Quadrangle, USGS, 1980

Harding Lawson Associates
Engineering and Environmental Services

General Location Map
SWAT/Amendments to Interim ROWD
Burlingame Landfill
Burlingame, California

PLATE **1**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
LFD	10881 041	MJ	6/92	


San Francisco Bay
Airport Boulevard
Sanchez Creek
Burlingame Lagoon
Highway 101
Anza Boulevard
Doubletree Hotel
US-1A
US-1
US-2
US-3
US-3A
US-4
US-5
US-6
US-7
US-8
US-9
LS-1
LS-2
LS-2A
LS-3
LS-5
LS-6
GR-1
GR-2
GR-3
GR-4
GR-5
GR-6
GR-7
GR-8
(Leachate Line Manhole)
G-2A
G-3
G-4
G-5
SW-1
SW-2
SW-3
EXPLANATION
Monitoring Well
Surface Water Sampling Location
Surface Elevation Contour (feet, MSL) (Survey of 1980)
Destroyed Well
Well Scheduled for Destruction
0
200
400
SCALE IN FEET
N
Harding Lawson Associates
Engineering and Environmental Services
Well Location Map
Third Quarter 1994 Monitoring Report
Burlingame Landfill
Burlingame, California
PLATE
1
DRAWN
CEG
JOB NUMBER
27883-2
APPROVED
DATE
9/94
REVISED DATE

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

DISCHARGE MONITORING PROGRAM

FOR

CITY OF BURLINGAME

BURLINGAME CLASS III SOLID WASTE DISPOSAL SITE

BURLINGAME, SAN MATEO COUNTY

ORDER NO. 95-130

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Self-Monitoring Program is issued in accordance with Section C.12 of Regional Board Order No. 95-130.

The principal purposes of a self-monitoring program by a waste discharger are:

(1) to document compliance with waste discharge requirements and prohibitions established by the Board,

(2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge,

(3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories,

(4) to assist the discharger in complying with the requirements of Article 5, Chapter 15 as revised July 1, 1991.

B. SAMPLING AND ANALYTICAL METHODS

Sampling

Sample collection, storage, and analyses shall be performed according to most recent version of EPA Standard Methods for the Analysis of Wastewater and in accordance with an approved sampling and analysis plan.

Water and wastewater analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytic work in his/her laboratory and he/she or their authorized representative shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. A composite sample is a sample composed of individual grab samples mixed in proportions varying not more than plus or minus five percent from the instantaneous rate of waste flow corresponding to each grab sample collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the period of discharge or 24 consecutive hours, whichever is shorter.

3. Receiving waters refers to any water which actually or potentially receives surface or groundwaters which pass into, through, or under the waste managment units or contaminated soils. The receiving waters are the groundwater beneath and adjacent to the waste managment units, the surface runoff from the site, and the drainage ditches surrounding the site. San Francisco Bay or it's subasins or nearby streams into which water from the unit discharges are considered receiving waters.

4. Standard observations refer to:

a. Receiving Waters

1) Floating and suspended materials of waste origin: presence or absence, source, and distance of travel.

2) Discoloration and turbidity: description of color, source, and nature of material.

3) Evidence of algal or other unusual growth presence or absence.

4) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

5) Evidence of beneficial use: presence of water associated wildlife.

6) Flow rate

7) Weather conditions: wind direction and estimated velocitty, total precipitation during previous five days and day of observations.

b. Perimeter of the waste management unit.

1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area. (Show affected area on map)

2) Evidence of algal or other unusual growth, presence or absence, characterization, mineral or salt deposition.

3) Evidence of erosion and/or daylighted refuse.

c. The waste management unit.

1) Evidence of algal or other unusual growth. Precipitation of sludge or minerals, quantity, nature and chemical composition.

2) Evidence of erosion and/or daylighted refuse.

3) Evidence of odors, presence or absence, charachterization, source and distanceof travel from source.

D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the sampling and analysis plan, in the folowing media:

1. Groundwater per Section 2550.7(b)
2. Surface water per Section 2550.7(c) and per the general requirements specified in Section 2550.7(e) of Article 5, Chapter 15 and
3. Vadose zone per Section 2550.7(d), wherever feasible.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger or laboratory and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.

2. Date and time of sampling.

3. Date and time that analyses are started and completed, and name off the personnel performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the

identity and volumes of reagents used. A reference to a specific section of standard EPA methods.

5. Calculation of results.

6. Results of analyses, and detection limits for each analyses.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written self-monitoring reports shall be filed by the discharger as specified in the Order. An annual report shall be filed as indicated within 45 days after completion of the 4th sampling round. The reports shall be comprised of the following:

a. Letter of Transmittal

a. A letter transmitting the essential points contained in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any required information, violations found during the last reporting period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting violations, a reference to the corespondence transmitting such information will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b .Each monitoring report shall include a compliance evaluation summary sheet. This sheet shall contain:

1) The sample mean and the sample variance for all sample sets taken from all compliance points, and shall determine if the difference between the mean of each sample set and the water quality protection standard is significant at the 0.05 level as described in Section 5 of Chapter 15. The discharger may propose a statistical procedure to be used in making this determination pursuant to Article 5, Section 2550.7, Subsection (e)(7), (e)(8), and (e)(9) of Chapter 15. If a statistically significant difference is found this shall be reported as a suspected release requiring the discharger to enter into a verification monitoring program.

2) A graphic description and map of the direction and elevation of groundwater flow and the piezometric surface under/around the waste management unit, based

upon the past and present water level elevations and pertinent visual observations.

3) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature, conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.

4) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations. The chain of custody record.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods, are used the exact methodology must be submitted for review.

2) In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogote samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

2. CONTINGENCY REPORTING

a.. A report shall be made by telephone of any seepage or overflow from the waste management unit immediately after it is discovered. A written report shall be filed with the Board within five days. This report

shall contain the following information:

1) a map showing the location(s) of any seepage or dike rupture.
2) approximate rate of overflow.
3) nature of effects; i.e. all pertinent observations and analyses; and
4) corrective measures underway or proposed.

b. A report shall be made in writing to the Board within seven days if a statistically significant difference is found between a self-monitoring sample set and a WQPS. Notification shall indicate what WQPS(s) have been exceeded. The discharger shall immediately resample at the compliance point(s) where this difference has been found and analyze another sample set of at least four portions split in the laboratory from the source sample.

c. If resampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger must submit to the Board within 90 days an amended Report of Waste Discharge for establishment of a verification monitoring program meeting the requirements of Section 2557 of Article 5 of Subchapter 15. This submittal shall include the information required in Section 2556(b)(2) of Subchapter 15.

d. The discharger must notify the Board within seven days if the verification monitoring program finds a statistically significant difference between samples from the verification monitoring program point of compliance and the WQPS(s).

e. If such a difference or differences are found by the verification monitoring program, it will be concluded that the discharger is out of compliance with this Order. In this event the discharger shall submit within 180 days an amended Report of Waste Discharge requesting authorization to establish a corrective action program meeting the requirements of Section 2550.10, of Article 5 of Chapter 15. This submittal shall include the information required in Section 2550.12(g)(3) of Chapter 15.

3. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year.

b .A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be neded to bring the discharger into full

compliance with the waste discharge requirements.

c. A map showing the waste managment units, monitoring well locations, ground and casing point measuring elevations and data on elevations at pond sampling and freeboard measuring locations.

d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.

e. Ponded water analytic data.

3. WELL LOGS

4. A boring log shall be submitted for each sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

a. For all monitoring wells established for this program continous core samples must be taken in all borings, unless multiple wells are to be constructed in the immediate vicinity, in which case only the deeper boring would need to be continously sampled. Each boring log must include the name, registration number and signature of the supervising geologist, the name of the person actually logging the hole, the name of the drilling company, type of drilling method used, grain size distribution analysis, soil moisture content, blow count, sample recovery rate, initial and stabilized water levels, in-place permeability, and ground surface elevation. Soil and clay samples should be retained for chemical analyses to determine if pollution or adsorption has ocurred from pond seepage.

b. For all monitoring wells established for this program, well construction details must include a sieve analysis of the formation and sand pack; the rationale for the selected slot size and sand pack; and the method used to place the sand pack, seal, and grout. Wells must be screened over the full length of the aquifer, and the sand pack cannot extend more than one foot above the screened interval. The well annulus must be sealed with bentonite concrete and a surface concrete seal must be placed at the top of the well. All wells must be surveyed to a clearly marked common reference point.

c. For all monitoring wells established for this program transmissivity, hydraulic conductivity and gradient must be determined.

PART B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. ON-SITE OBSERVATIONS - Report quarterly

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
P - 1 thru P - n	Located peripherally to the waste management unit	Standard observations for the waste management unit	Monthly

A map showing compliance points shall be submitted by the discharger in the quarterly monitoring reports.

B. GROUNDWATER, LEACHATE AND SURFACE WATER MONITORING

Report quarterly; Reporting periods and monitoring report due dates.

1. Winter/Spring Reporting Period: The discharger is required to collect samples for all monitoring points between February 1st and March 31. The report is due April 31.

2. The discharger is required to collect samples for all monitoring points at 3 months intervals after the Winter/Spring sampling event and submit the reports within 30 days thereafter.

3. Annual summary report: The discharger shall submit an annual summary report to the Board covering the previous 4 quarters of monitoring. The report can be combined with the 4th quarter monitoring report.

4. Leachate sampling and analyses shall be conducted semi-annually

The discharger shall monitor the leachate collection system quarterly and

if found to contain leachate activate the extraction system. The discharger shall report leachate levels and any action taken in the quarterly and annual reports.

Groundwater, surface water and seepage water monitoring points shall be monitored as outlined below.

1) SURFACE WATER

SW - 1 and SW - 2

2) SHALLOW GROUNDWATER WELLS

a. GR - 1, GR - 3, GR - 4, (semi-annually)

b. US -1A, US - 2, US-3A, US - 5, US - 6, US - 7, US - 8, US - 9.

3) ANALYTIC PARAMETERS

As per attached table

C. FACILITIES MONITORING

The discharger shall collect all surface and groundwater samples, to include the period February - March, the rainy season or shortly thereafter. The discharger shall inspect all facilities to insure proper and safe operation once per quarter and report any incidents not in compliance with this Order.

D. STORM WATER MONITORING

Report semi-annually

Stormwater monitoring shall be performed as shown on the attached table. During the wet season (October through April), estimate or calculate the volume of storm water discharge from each outfall and collect and analyze samples of storm water.

I Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this

Boards resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 95-130.

2. Is effective on the date shown below;

3. may be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.

Steven R. Ritchie
Executive Officer

Date Ordered: June 21, 1995.

Attachment:
Discharge Monitoring Plan, List of Analytic Parameters

Discharge Monitoring Plan - Analytic Parameters

Parameters	Method (USEPA)	Frequency	Reference

Discharge Monitoring Plan - Analytic Parameters

Parameters	Method (USEPA)	Frequency	Reference
Leachate Level	Field	Quarterly	1
Water Level	Field	Quarterly	1
Temperature	Field	Quarterly	1
Electrical Conductivity	Field	Quarterly	3
pH	Field	Quarterly	3
Total Organic Carbon	415.1	Quarterly	2
Total Nitrogen - Nitrate + Kjeldal	351.2	Quarterly	2
Turbidity	Field	Quarterly	1, 4
Alkalinity	310.1	Quarterly	2
BOD	410.4	Quarterly	4
COD	410.2	Quarterly	2, 4
TDS	160.1	Quarterly	2, 4
Tot. Suspended Solids	160.2	Quarterly	2, 4
Halogenated VOCs	8010 or 601	Annually	3
Aromatic VOCs	8020 or 602	Quarterly	3
Chlorinated Herbicides	8150 with capillary column	Annually	3
Antimony	6010	Quarterly	3
Chromium (total)	6010	Quarterly	3
Cobalt	6010	Quarterly	3
Nickel	6010	Quarterly	3
Silver	6010	Quarterly	3
Zinc	6010	Quarterly	3
Copper	6010	Semi-annually	3

1. Not Applicable
2. Methods for Chemical Analysis for Water and Wastes, EPA600/4/79, revised March 1983
3. EPA SW-846
4. Only for Surface Water Monitoring